

Office Action Summary

Application No.

10/671,703

Applicant(s)

DEAN ET AL.

Examiner

KimbleAnn Verdi

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-21 and 23-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-21 and 23-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 20090626
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 19-21 and 23-44 are pending in the current application.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 17, 2009 has been entered.

Claim Objections

3. Claims 19-21, 23-33 are objected to because of the following informalities:
 - a. Claim 19, lines 8 and 16, the recitation of "the data" should be "the received data", and line 13, the recitation of "the memory", should be "the first memory";
 - b. Claim 19, line 2, the recitation of "the computer", should be "the computer system";
 - c. Claims 20-21 and 23-33 did not cure the deficiencies of claim 19.
 - d. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 19-21, 27-29, 31, 33-34, 36, and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breyer et al. (hereinafter Breyer) (U.S. Patent 6,256,625 B1) in view of Williams et al. (hereinafter Williams) (U.S. Patent 5,911,066), and further in view of Ashe et al. (hereinafter Ashe) (U.S. Patent 6,593,947 B1).**

6. **As to claim 19**, Breyer teaches the invention substantially as claimed including a data transfer system for transferring data from a data source to multiple data sink objects in a computer system, wherein the data source is coupled to the computer, the system comprising:

an interface for communicating with the data source to receive the data from the data source (IMAQ Control Object, Fig. 5, col. 2, lines 35-36);

a data processor for encapsulating the data into a data object in memory (CPU 202, Fig. 2); and

7. Breyer does not explicitly disclose a data server for transferring to the multiple data sink objects identification information identifying the data object, the data server providing a pointer indicating the location of the data object in the memory to identify the data object; and

the multiple data sink objects access the data object using the identification information and sharing the data object among the multiple data sink objects to prevent extraneous copies of the data.

8. However, Williams teaches a data server (Data Source 1102, Fig. 11) for transferring to the multiple data sink objects identification information identifying the data object (step 1202, Fig. 12, col. 15, lines 25-27), the data server providing a pointer indicating the location of the data object in the memory to identify the data object (step 1204, Fig. 12, col. 15, lines 25-29); and

the multiple data sink objects access the data object using the identification information (step 1204-1208, Fig. 12, col. 15, lines 27-45 and col. 17, lines 34-36).

9. Breyer modified by Williams does not explicitly disclose sharing the data object among the multiple data sink objects to prevent extraneous copies of the data.

10. However Ashe teaches sharing the data object among the multiple data sink objects (i.e. elements) to prevent extraneous copies of the data (col. 2 lines 40-44 and col. 5, lines 62-64).

11. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the dynamic binding mechanism of Breyer with the teachings of data transfer mechanisms from Williams and Ashe because these features would have provided an interface to computer programs so that the computer programs may transfer data in a uniform manner after a connection is established (col. 5, lines 54-58 of Williams) and provided a mechanism with the ability to define references to imaging object reference data that allows sharing of images among elements (col. 5, lines 62-64 of Ashe).

12. **As to claim 20**, Breyer as modified by Williams and further modified by Ashe teaches wherein the data server includes a list listing the multiple data sink objects that are registered with the data server (col. 16, lines 8-22 of Williams).

13. **As to claim 21**, Breyer teaches wherein the computer system provides a technical computing environment (video capture system, col. 2, lines 23-33).

14. **As to claim 27**, Breyer teaches wherein the data source provides data sequence continuously for a period of time (sequence of image data, col. 4, line 37).

15. **As to claim 28**, Breyer teaches wherein the data source provides a package of data, the package of data being used independently of other packages of data (compressed data, col. 4, line 37).

16. **As to claim 29**, Breyer teaches wherein the package of data includes a frame of image data (video frame, col. 4, lines 31-37).

17. **As to claim 31**, Breyer teaches wherein the data processor configures a maximum amount of memory that all data objects use at a given instance of time (col. 6, lines 64-67, col. 7, lines 1-2).

18. **As to claim 33**, Breyer teaches wherein the interface, the data processor, and the data server are implemented independently of MATLAB (image application, col. 6, lines 51-54).

19. **As to claim 34**, this claim is rejected for the same reasons as claim 19 since claim 34 recites the same or equivalent invention, see the rejection to claim 19 above.

20. **As to claim 36**, this claim is rejected for the same reasons as claim 21 since claim 36 recites the same or equivalent invention, see the rejection to claim 21 above.

21. **As to claim 42**, Breyer teaches wherein the instructions are run independently of MATLAB (image application, col. 6, lines 51-59).

22. **As to claim 43**, Breyer teaches wherein the instructions are originated from code written with C programming language (col. 11, line 41).

23. **As to claim 44**, Breyer as modified by Williams and as further modified by Ashe teaches wherein the instructions are originated from code written with an object-oriented programming language such as C++, C# and Java (col. 6, lines 26-27 of Williams).

24. **Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breyer et al. (hereinafter Breyer) (U.S. Patent 6,256,625 B1) in view of Williams et al. (hereinafter Williams) (U.S. Patent 5,911,066), and further in view of Ashe et al. (hereinafter Ashe) (U.S. Patent 6,593,947 B1), as applied to claim 19 above, and further in view of Thomas et al. (hereinafter Thomas) (U.S. Patent 7,523,191).**

25. **As to claim 23**, Breyer as modified by Williams and further modified by Ashe does not explicitly teach at least one or more data listener object that is registered to a respective one of the multiple data sink objects.

26. However, Thomas teaches one or more data listener object (i.e. client as listener) that is registered to the multiple data sink object (i.e. sink of server, col. 39, lines 38-42, 55-60 and col. 31, lines 15-41 and 55-60).

27. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the system of Breyer as modified by Williams and as further modified by Ashe with the teachings of a client service from Thomas because this feature would have further provided a mechanism for listening on the outgoing notification interface of the applicable server module which may be realized similar to a JAVA™ listener (col. 39, lines 56-60 of Thomas).

28. **As to claim 24**, Breyer as modified by Williams, further modified by Ashe, and as further modified by Thomas teaches wherein the respective data sink object deletes each of the at least one data listener objects (i.e. resign as listener of Thomas) registered with the data sink object when the respective data sink object is deleted (i.e. release interface pointer, col. 32, lines 1-13, 64-66 and col. 40, lines 43-51 of Thomas).

29. **As to claim 25**, Breyer as modified by Williams, further modified by Ashe, and as further modified by Thomas teaches wherein the respective one of the multiple data sink objects notifies each of the at least one data listener object registered with the respective one of the multiple data sink objects (i.e. server notifies client of shutdown of

Thomas) when the respective one of the multiple data sink objects is deleted (i.e. release interface pointer, col. 32, lines 64-67 and col. 40, lines 44-47 of Thomas).

30. **As to claim 26**, Breyer as modified by Williams, further modified by Ashe, and as further modified by Thomas teaches wherein the respective one of the multiple data sink object notifies each of the at least one data listener object (i.e. client service of Thomas) when the respective one of the multiple data sink object is updated with a new data object (i.e. profile updated, col. 32, lines 30-38 and col. 40, lines 1-10 of Thomas).

31. **Claims 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breyer et al. (hereinafter Breyer) (U.S. Patent 6,256,625 B1) in view of Williams et al. (hereinafter Williams) (U.S. Patent 5,911,066), and further in view of Ashe et al. (hereinafter Ashe) (U.S. Patent 6,593,947 B1), as applied to claims 19 and 28 above, and further in view of Rhoades et al. (hereinafter Rhoades) (U.S. Publication No. 2003/0041163 A1).**

32. **As to claim 30**, Breyer as modified by Williams and further modified by Ashe does not explicitly teach wherein the package of data includes a scan of radar, sensor, or audio data, as well as network data packets.

33. However, Rhoades teaches wherein the package of data includes a scan of radar, sensor, or audio data, as well as network data packets (paragraph 0127).

34. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the image data of Breyer as modified by Williams and as further modified by Ashe with the teachings of a data packet from Rhoades because this feature would have further provided a new processor architecture that is suitable, specifically but not exclusively, for Data Flow processing problems (paragraph 0010 of Rhoades).

35. **As to claim 32**, Breyer as modified by Williams, further modified by Ashe, and as further modified by Rhoades teaches a processor for controlling the interface, the data processor, and the data server, wherein the processor is 64 bits or more (ALU of processor, paragraph 0088 of Rhoades).

36. **Claims 35, 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breyer et al. (hereinafter Breyer) (U.S. Patent 6,256,625 B1) in view of Williams et al. (hereinafter Williams) (U.S. Patent 5,911,066), and further in view of Ashe et al. (hereinafter Ashe) (U.S. Patent 6,593,947 B1), as applied to claim 34 above, and further in view of Hewett (U.S. Patent 6,823,524 B1).**

37. **As to claim 35**, Breyer as modified by Williams and as further modified by Ashe does not explicitly teach a data sink listener object that is registered with one or more of the data sink objects.

38. However, Hewett teaches a data sink listener object that is registered with one or more of the data sink objects (event generator object (A) 30, Fig. 5, event listener object (B) 32, Fig. 5, col. 4, lines 27-30, and step 64, Fig. 6, col. 4, lines 61-64).

39. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the image object of Breyer as modified by Williams and as further modified by Ashe with the teachings of an event object from Hewett because this feature would have further provided a mechanism for a object-oriented data processing system which uses events to pass control from an event generator object to a listener object (col. 1, lines 21-25 of Hewett).

40. **As to claim 37**, Breyer as modified by Williams, as further modified by Ashe, and as further modified by Hewett teaches wherein the data sink listener object performs a task relating to a function of a respective one of data sink object (object B can receive and execute event E1, col. 4, lines 3-9 of Hewett).

41. **As to claim 38**, Breyer as modified by Williams, as further modified by Ashe, and as further modified by Hewett teaches wherein the data sink listener object performs a task relating to a function of a respective one of the data sink object on a thread of the data server object (run on common thread, col. 4, lines 24-25 of Hewett).

42. **As to claim 39**, Breyer as modified by Williams, as further modified by Ashe, and as further modified by Hewett teaches wherein the data sink listener object performs a task relating to a function of a respective one of the data sink object on a thread different from that of the data server object (NLS objects run on separate threads 46, 50, Fig. 5, col. 4, lines 40-45 and step 86, Fig. 7 of Hewett).

43. **As to claim 40**, Breyer as modified by Williams, as further modified by Ashe, and as further modified by Hewett teaches wherein at least one of the data sink object perform a function on a thread of the data server object (step 82, Fig. 7 of Hewett).

44. **As to claim 41**, Breyer as modified by Williams, as further modified by Ashe, and as further modified by Hewett teaches wherein at least one of the data sink object perform a function on a thread different from that of the data server object (event generator object passes event objects in separate threads, col. 4, lines 50-53 of Hewett).

Response to Arguments

45. Applicant's arguments with respect to claim 19-21 and 23-44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

46. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,913,032 to Schwartz et al., U.S. Patent 6,230,213 B1 to Davidson, U.S. Patent 6,438,616 B1 to Callsen et al., U.S. Patent 6,598,094 B1 to Wollrath et al., U.S. Patent 6,766,350 B1 to Moreau, U.S. Patent 7,036,127 B2 to Cheng et al., U.S. Patent 7,062,771 B2 to Wall et al., U.S. Patent 7,216,091 B1 to Blandina et al., U.S. Publication No. 2002/0178298 A1 to Callsen et al, U.S. Publication No. 2003/0088536 A1 to Behnia, U.S. Publication No. 2003/0196063 to Garst et al., U.S. Publication No. 2005/0076343 A1 to Kammhuber disclose sharing objects in a client/server computing environment.

47. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KimbleAnn Verdi whose telephone number is (571)270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

48. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2194

49. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hyung S. SOUGH/
Supervisory Patent Examiner, Art Unit 2194
07/01/09

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KV